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## Patent Abstracts of Japan

PUBLICATION NUMBER : 61052385

PUBLICATION DATE : 15-03-86

APPLICATION DATE : 17-08-84

APPLICATION NUMBER : 59171259

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INT.CL. : C25B 11/08

TITLE : ELECTRODE FOR ELECTROLYZING DILUTED AQUEOUS SODIUM CHLORIDE SOLUTION

ABSTRACT : PURPOSE: To improve the durability and current efficiency of the titled electrode having a coating layer of a catalyst contg. the oxides of Pt group metals on an electrically conductive substrate by using  $\text{RuO}_2$ ,  $\text{IrO}_2$ , Pt and  $\text{SnO}_2$  mixed in a specified ratio as the constituents of the coating layer.

CONSTITUTION: When a dil. aqueous NaCl soln. such as seawater is electrolyzed to manufacture hypochlorous acid for disinfection, bleaching or other use, an electrode having a coating layer of a catalyst is used. The electrode is obtd. by applying a mixture consisting of, by mole, 3~40%  $\text{RuO}_2$ , 5~40%  $\text{IrO}_2$ , 3~ 50% Pt and 10~50%  $\text{SnO}_2$  to the cleaned surface of a substrate of an electrically conductive metal such as Ti, Zr or Nb and by carrying out baking. In the mixture, Sb may be substituted in the form of  $\text{SbO}_3$  for  $\leq 10\%$  of Sn in  $\text{SnO}_2$ . The resulting electrode has superior durability and current efficiency when a dil. aqueous NaCl soln. is electrolyzed to manufacture hypochlorous acid.

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